

VCCIO

GND

INT

PP

CSN

SCK

SDI

SDO

CLK16

ENN

REFR1

REFR2

REFL1

REFL2

GND

MOTOR1

GND

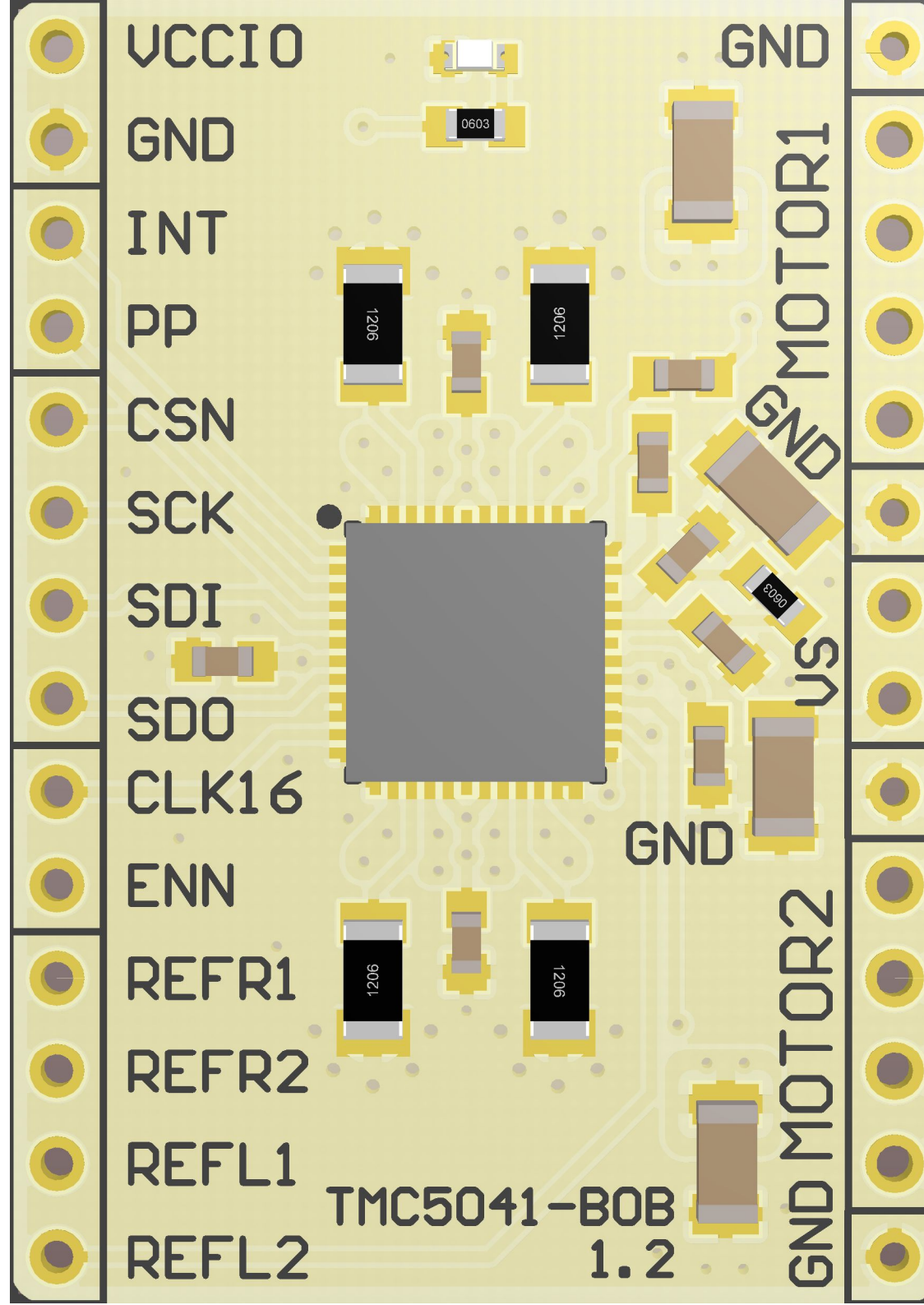
US

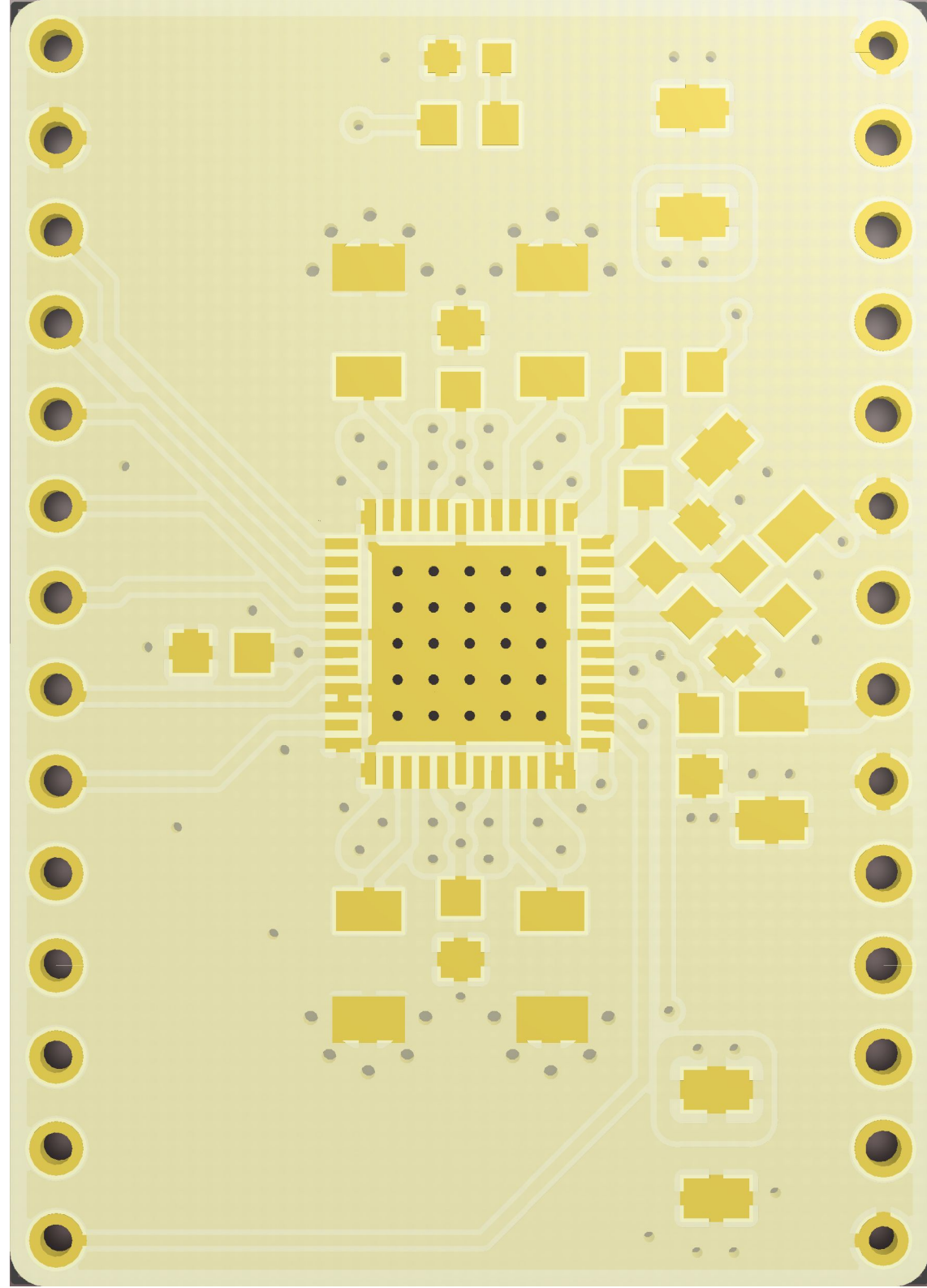
GND

MOTOR2

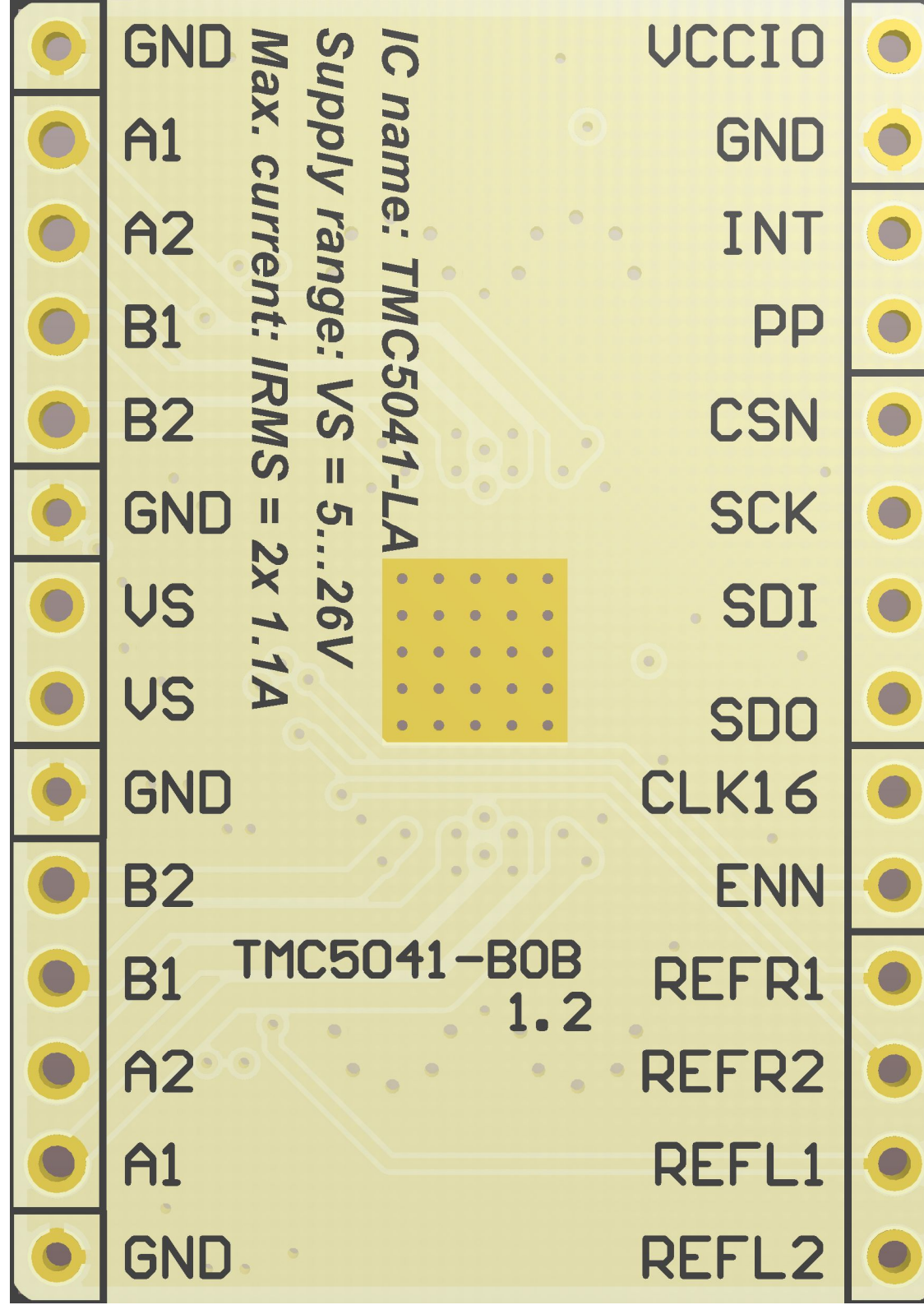
GND

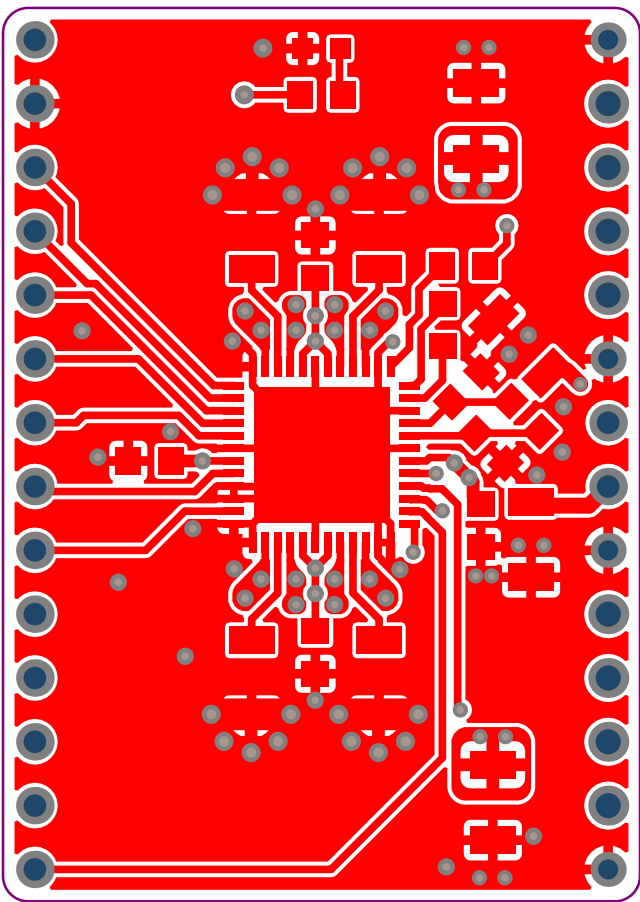
TMC5041-BOB  
1.2

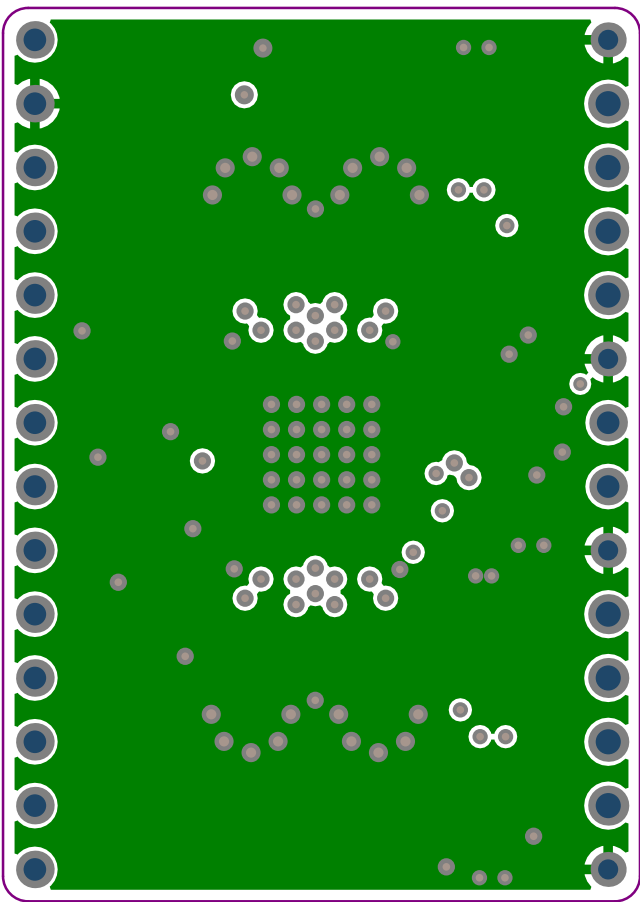


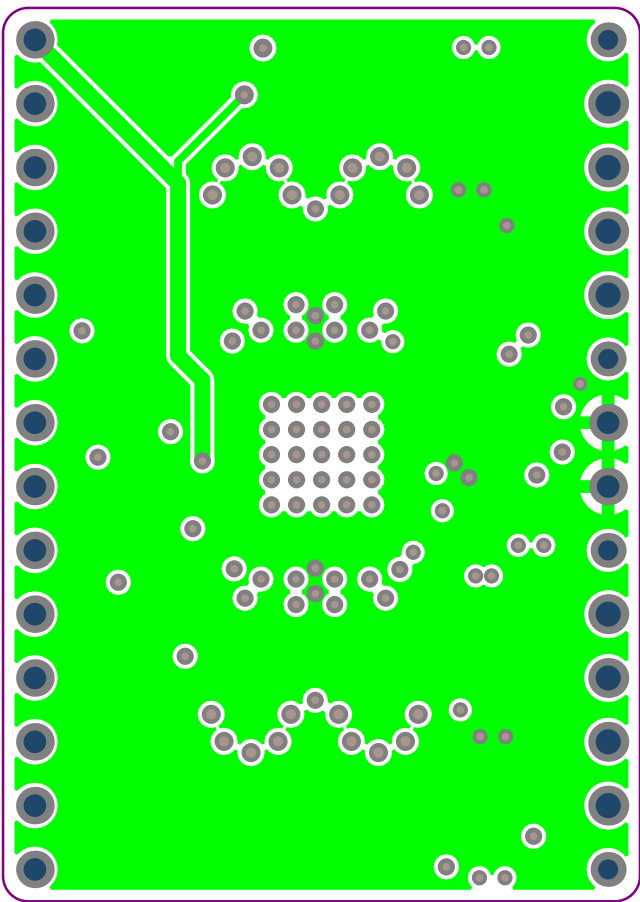


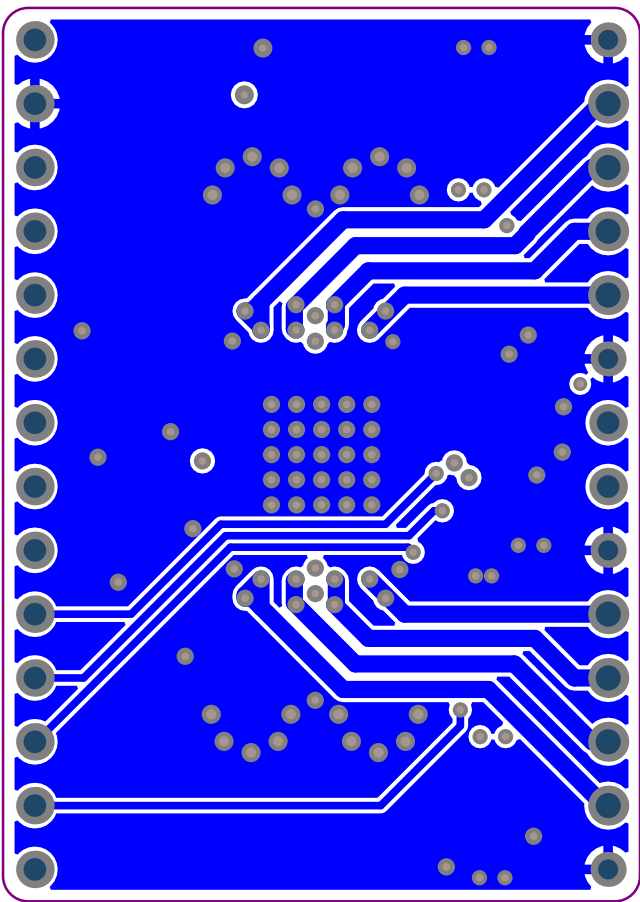














VCCIO

GND

GND

INT

PP

CSN

SCK

SDI

SDO

CLK16

ENN

REFR1

REFR2

REFL1

REFL2

TMC5041-B0B  
1.2

GND MOTOR1

V5

GND

GND MOTOR2

GND

A1

A2

B1

B2

GND

VS

VS

GND

B2

B1

A2

A1

GND

Max. current:  $I_{RMS} = 2 \times 1.1A$

Supply range:  $V_S = 5 \dots 26V$

IC name: TMC5041-LA

TMC5041-BOB  
1.2

VCCIO

GND

INT

PP

CSN

SCK

SDI

SDO

CLK16

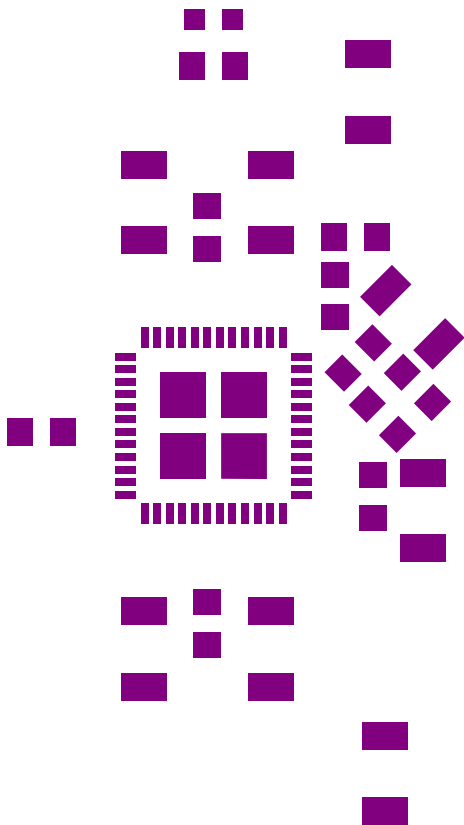
ENN

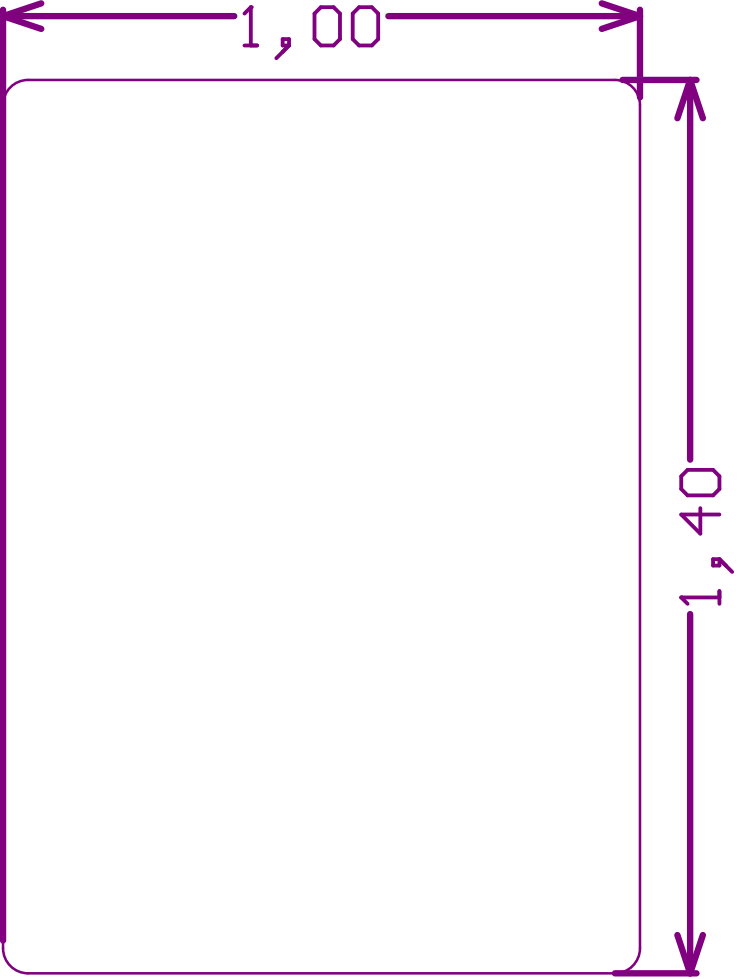
REFR1

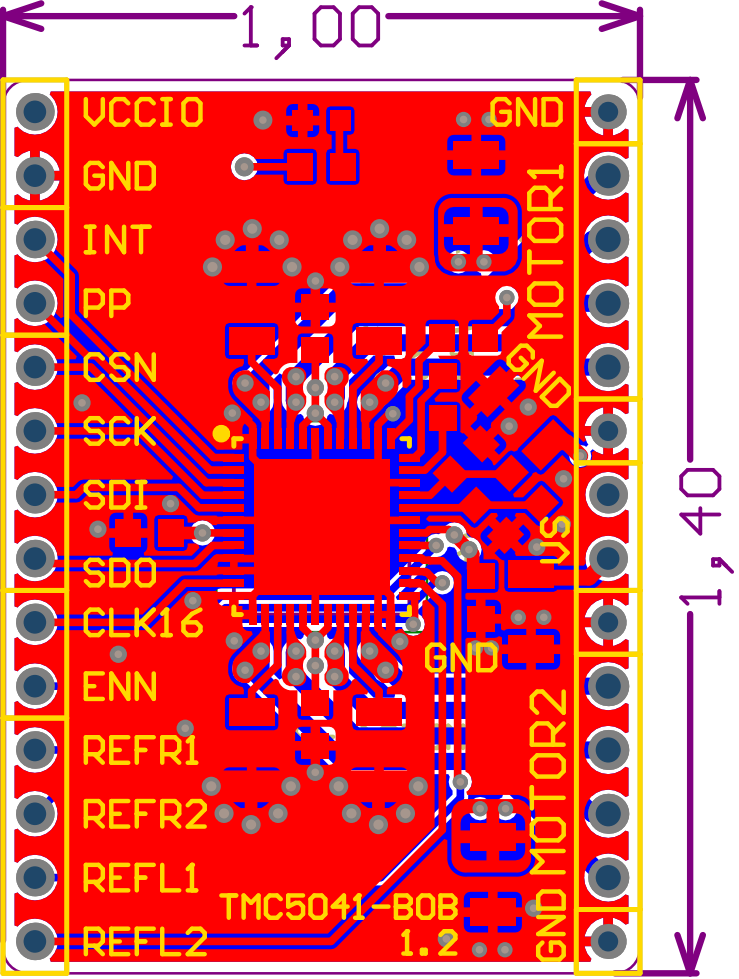
REFR2

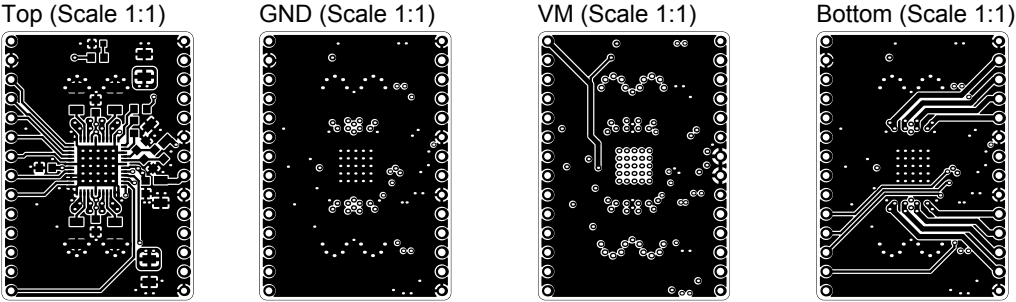
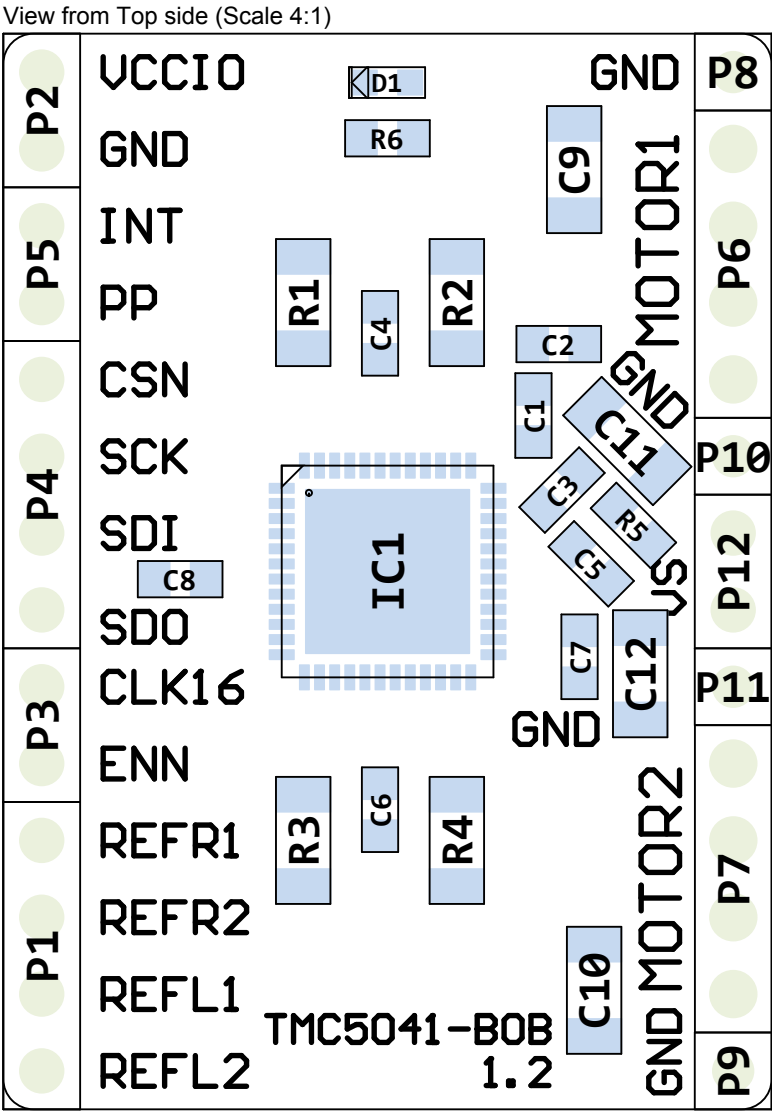
REFL1

REFL2

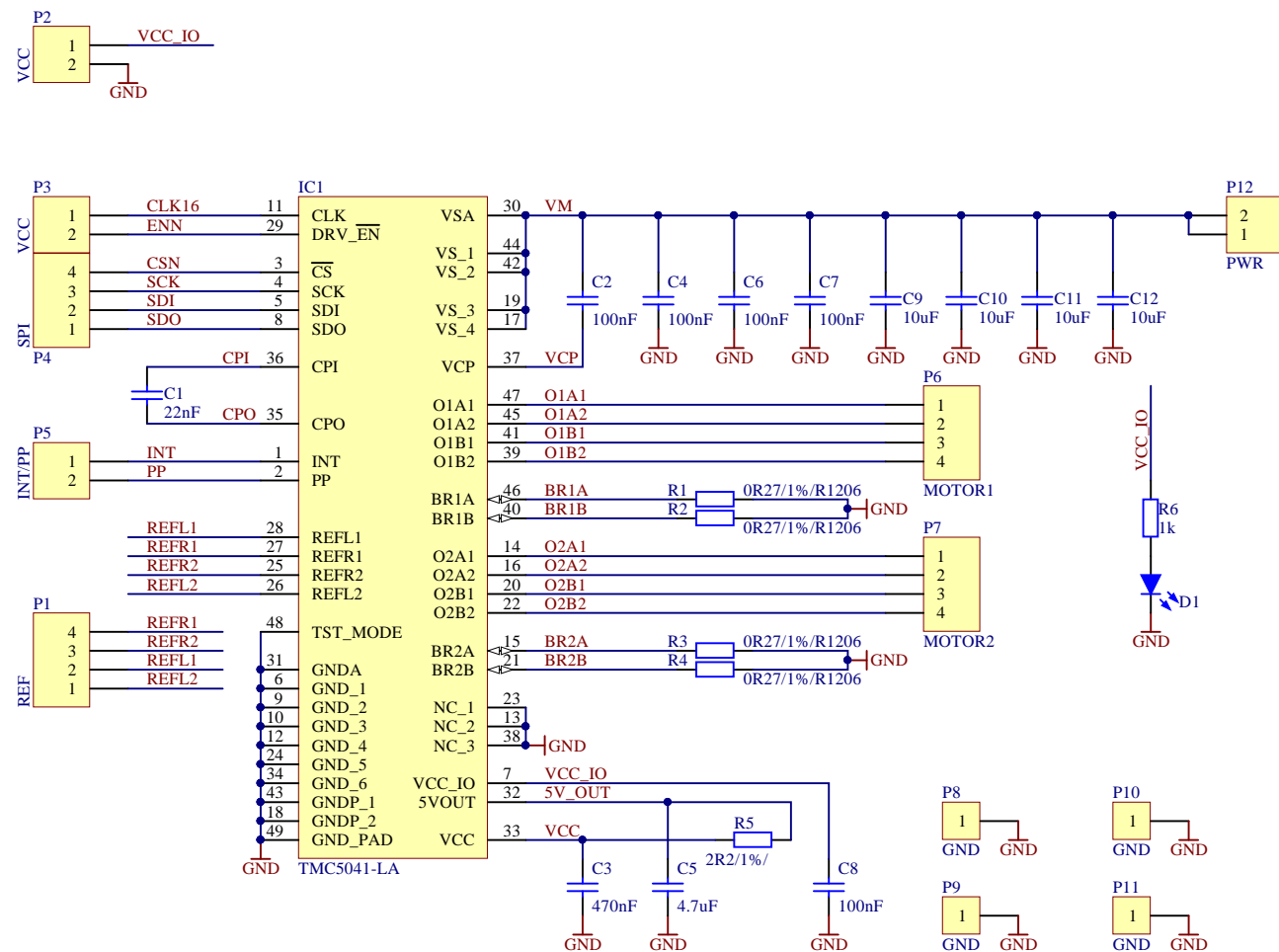












Title		
TMC5041-BOB		
Size	Number	Revision
A4		1.2
Date:	18.07.2017	Sheet of
File:	C:\Users\...\TMC5041_BOB_V1_2.SchDoc	Drawn By:

# BOM

Project: TMC5041-BOB

Version: 1.2

Date: 18.07.2017

#	Quantity	MPN	Comment	Designator	Footprint	Description	Note	MF
1	1	MC0603B223K500CT	22nF	C1	C0603	Ceramic capacitor		Multicomp
2	5	MC0603F104M500CT	100nF	C2, C4, C6, C7, C8	C0603	Ceramic capacitor		Multicomp
3	1	MC0603X474K160CT	470nF	C3	C0603	Ceramic capacitor		Multicomp
4	1	MC0603X475K100CT	4.7uF	C5	C0603	Ceramic capacitor		Multicomp
5	4	GRM319R6YA106KA12D	10uF	C9, C10, C11, C12	C1206	SMD Multilayer Ceramic Capacitor, 1206 [3216 Metric], 10 µF, 35 V, ± 10%, X5R, GRM Series		MURATA
6	1	LTST-C191TBKT-5A	LED, Blue, SMD, 20mA, 2.8V, 465 nm	D1	LED_0603	LED, Blue, SMD, 20mA, 2.8V, 465 nm		Lite-On
7	1	TMC5041-LA	TMC5041-LA	IC1	TMC5041_QFN48_0.5_7.0X7.0	Dual controller/driver for up to two 2-phase bipolar stepper motors, with SPI, Step/Dir, QFN48(7x7)		TRINAMIC
8	4	RCWE1206R270FKEA	0R27/1%/R1206	R1, R2, R3, R4	R1206	Resistor		Vishay
9	1	MC0063W060312R2	2R2/1%/	R5	R0603	Resistor		Multicomp
10	1	MC0063W060311K	1k	R6	R0603	1 kohm, 50 V, 0603 [1608 Metric], 63 mW, ± 1%, MC Series		MULTICOMP

Approved	Notes	32

ChangeLog

V1.0 - Initial design

V1.1 - Redesign and Optimization after 1st Round

- + Rearranged right side connector signals starting from top:  
GND / A1 / A2 / B1 / B2 / GND / VS / VS / GND / B2 / B1 / A2 / A1 / GND
- + Left side connector: Pin 1 - VCCIO, Pin 2 - GND
- + Added 4x 10uF
- + Bottom side labels (IC Name, supply range, max. current of this BOB):  
TMC5041-LA, VS = 5...26V, IphaseRMS = 2x 1.1A
- + Changed silkscreen text width from 5mil to 7mil.
- + Changed board name text height to 35mil.

V1.2 - Changed pin hole diameters from 0.9mm to 1mm for headers P6 (MOTOR1) and P7 (MOTOR2).

Title			<i>TMC5041-BOB</i>		
Size	Number			Revision	
A4				<i>1.2</i>	
Date:	18.07.2017			Sheet	of
File:	C:\Users\...\ChangeLog.SchDoc			Drawn By:	

